



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Reuel S. Orocio)
Serial No. 10/047,865) Examiner: Edgar, Richard A.
Filed: January 15, 2002) Art Unit: 3745
For: IMPELLER AND METHOD OF) Date: September 2, 2003
MANUFACTURING SAME)

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NOV 07 2003

TECHNOLOGY CENTER R3700

DECLARATION UNDER RULE 131(b)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Reuel S. Orocio and Thang D. Vu, the applicants in the above identified patent application, declare as follows:

1. Sometime prior to December 4, 2001, Reuel S. Orocio and Thang D. Vu conceived of an invention of a pump impeller that is formed in a single molding operation with the pump impeller including vanes, a shroud and a shaft sleeve so that the longitudinal center axis of an annular inlet ring mounted on the shroud has a longitudinal center axis that is in substantial alignment with the sleeve so that an efficient, substantially noise-free operation is obtained during rotation of the impeller.


2. Enclosed is a copy of the Disclosure that was submitted to Patent Agent, Jack C. Munro, of said invention, with this Disclosure being dated October 31, 2001.

Declaration to IMPELLER AND METHOD OF MANUFACTURING SAME
Reuel S. Orocio, inventor
Serial No. 10/047,865
Filed January 15, 2002
Page 2 of 2

3. Reuel S. Orocio and Thang D. Vu proceeded to have a mold manufactured that would result in the production of the impeller of the subject invention, and during the time the mold was being constructed, a patent application was prepared and filed by Patent Agent, Jack C. Munro, on January 15, 2002.

Reuel S. Orocio and Thang D. Vu further declare that the above statements have been made with the knowledge that willful false statements and the like are punishable by fine and/or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any such willful false statement may jeopardize the validity of this application or any patent resulting therefrom.

Respectfully submitted,


Reuel S. Orocio

10/03/2003


Thang D. Vu

10/03/2003



PUMPS FOR THE
PURE WATER INDUSTRY

ISO 9001 Registered Quality System

Aqua-Flo, Inc.

P.O. Box 2526 • Chino, CA 91708-2526

5651 Schaefer Avenue • Chino, CA 91710-9049

(909) 591-7453 • FAX (909) 627-5660

www.aqua-flo.com • e-mail: aqua-flo@aqua-flo.com



10/31/01

~~PAGE~~ 9 PAGER
— INC. THIS
SHEET.

HELLO JACK,

ATTACHED ARE THE ILLUSTRATION
NOTING THE REQUIREMENTS AND
HOW THE NEW DESIGN ADDRESSES
SUCH ISSUES.

PLEASE LET ME KNOW IF YOU
NEED MORE INFO.

REGARDS,

REUEL OROCIO

PHONE: (909) 591-7453 EXT. 33

ET FAX: (909) 591-9776

mail: reuel@aqua-flo.com

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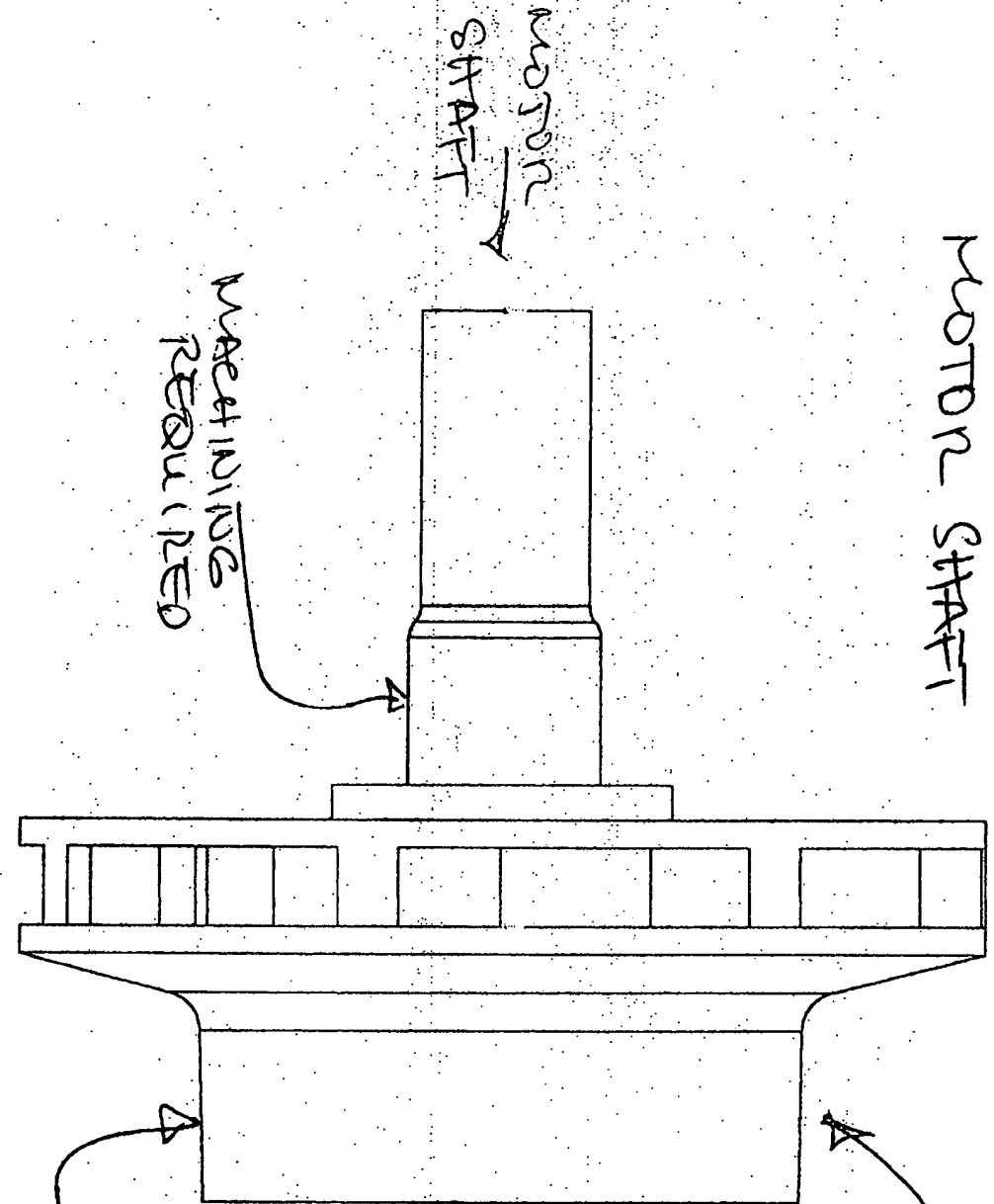
NOV 07 2003

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NOTE: CONDUCTIVITY OR T.I.R.
IS REFERENCED THRU

MOTOR SHAFT



SINCE THESE
WERE WELDED AS
SEPARATE
COMPONENTS,
THE WELDED
T.I.R. VARIES
FROM .030" TO
.060"
FOR THIS REASON
MACHINING IS
REQUIRED

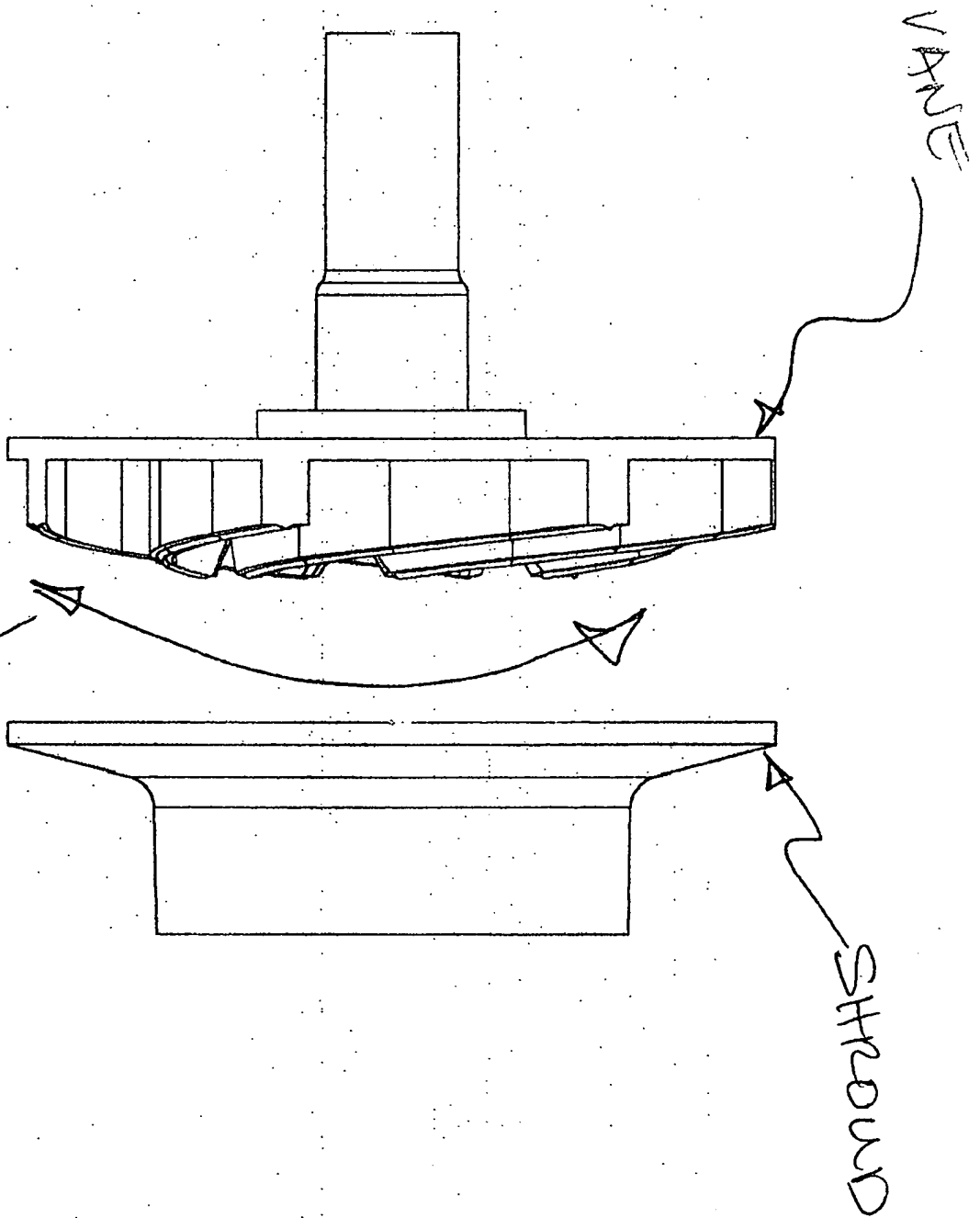
MACHINING
REQUIRED

CURRENT DESIGN

COMPLETE WELDED ASSEMBLY (WANE WELDED TO STRAUND)

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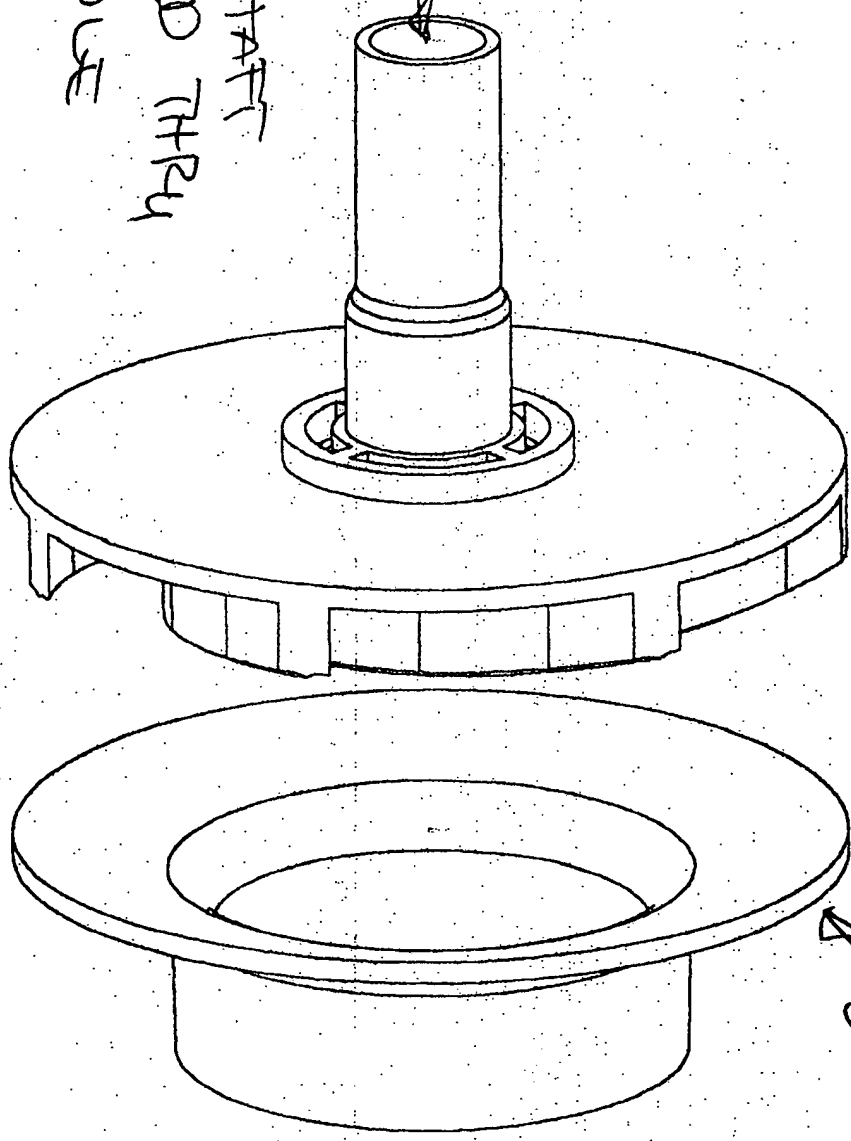
Current Design Individual Parts



EVEN WITH GOOD
FIXTURING THE
SHROUD COULD
MOVE SIDEWAYS
DURING WELDING

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WATER STAFF
THREADED THRU
THIS HOLE



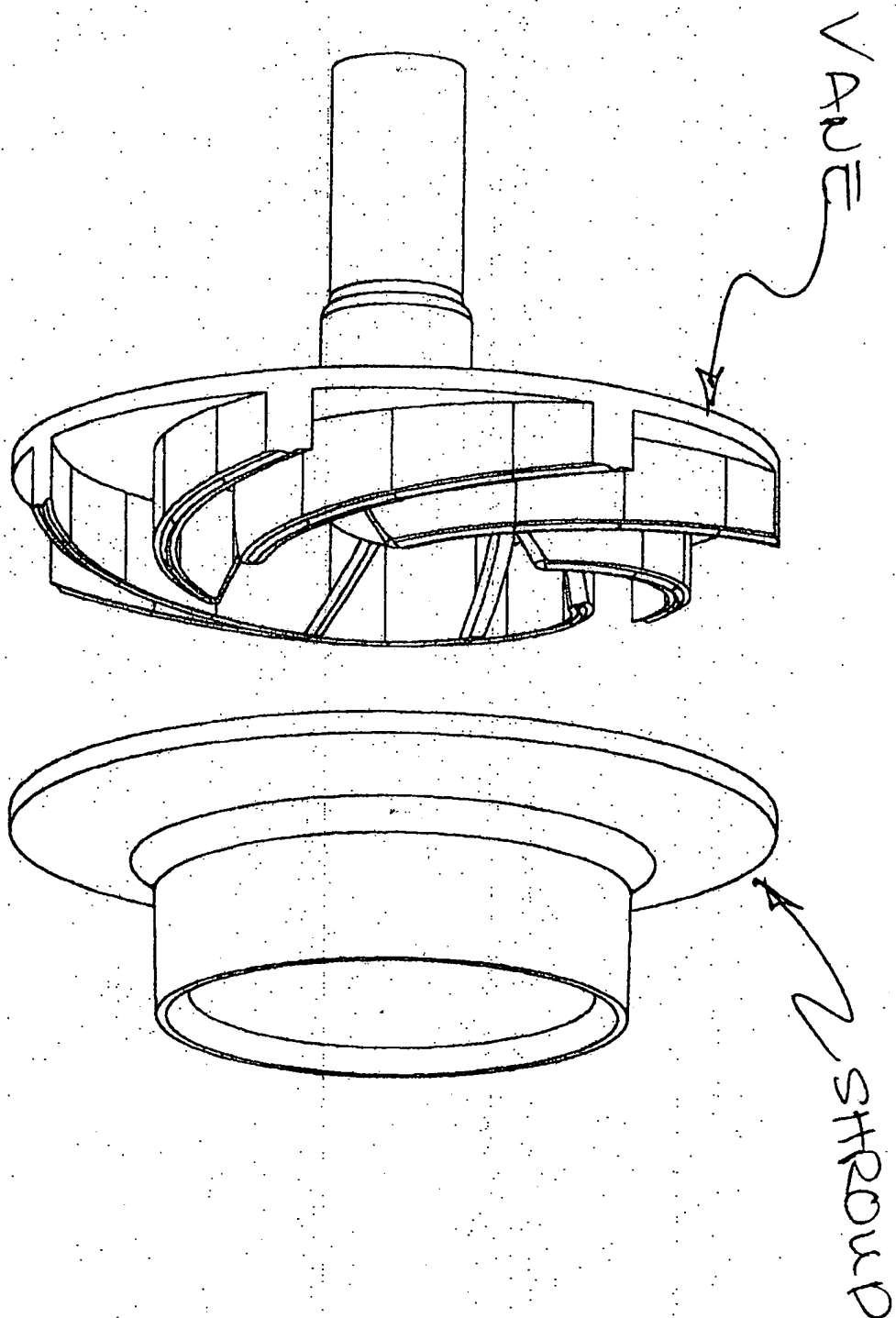
Water

Staff

CURRENT DESIGN
INDIVIDUAL PARTS

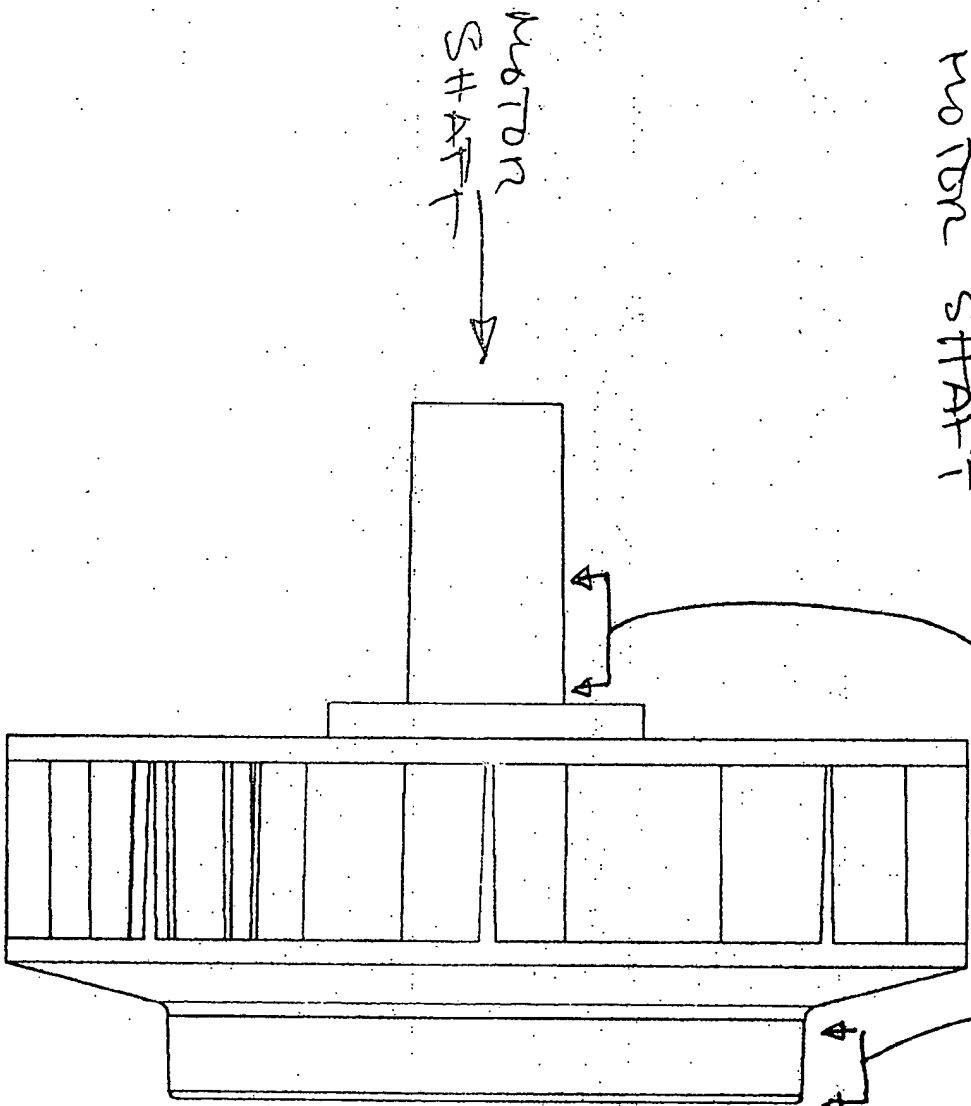
page 8 of 9

CURRENT DESIGN
INDIVIDUAL PARTS



Page 9 of 9

NOTE: CONCENTRICITY OF A.I.R. HOLES
IS REFERENCED FROM
MOTOR SHAFT



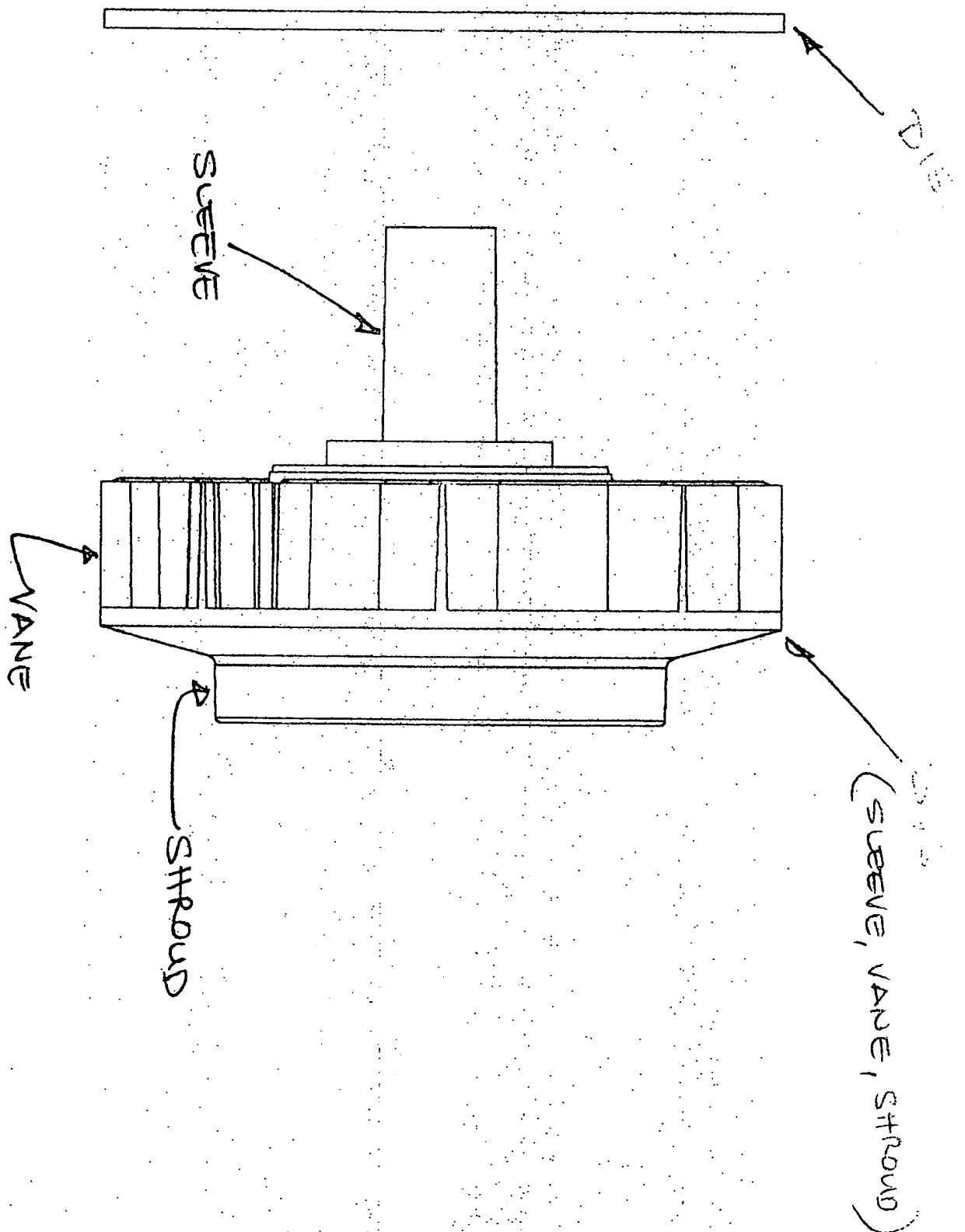
LEAST .008" T.I.R.

CURRENT DESIGN
DOES NOT EXCEED
.006" T.I.R.
THEREFORE NO
SECONDARY OPERATION
(MACHINING) IS
REQUIRED

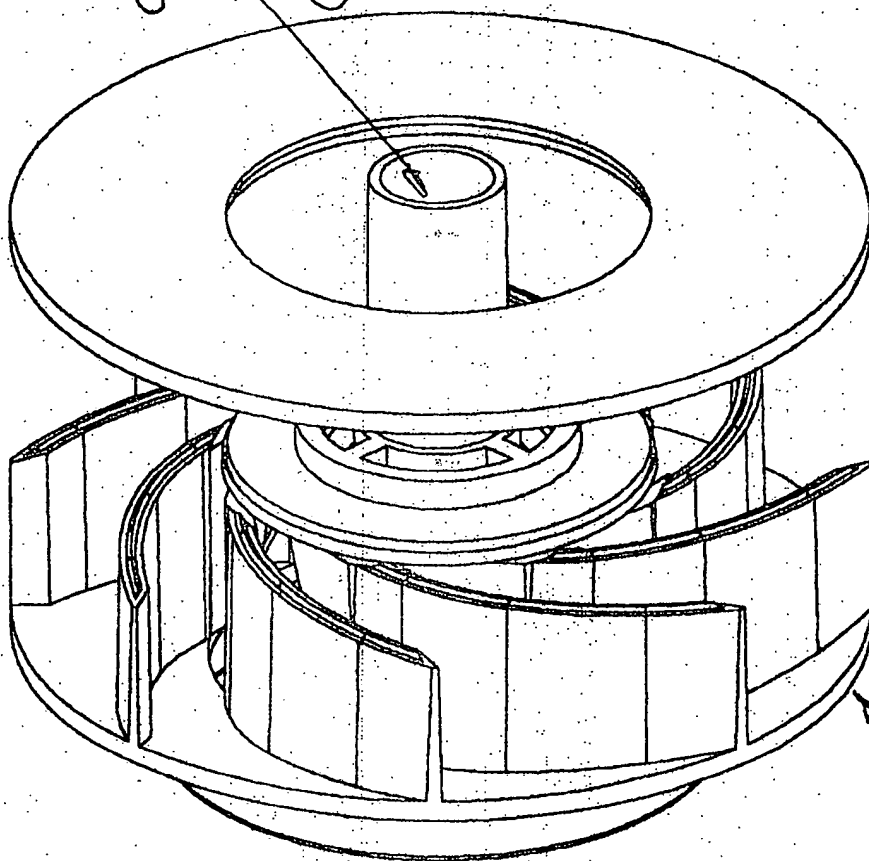
Form Involved Runout

NEW DESIGN
COMPLETE WELDED ASSEMBLY (DISK WELDED TO SVS)
CODE NAME: SVS

NEW DESIGN
INDIVIDUAL PARTS



MOTOR
SHAFT
IS THREADED
THRU THIS
HOLE

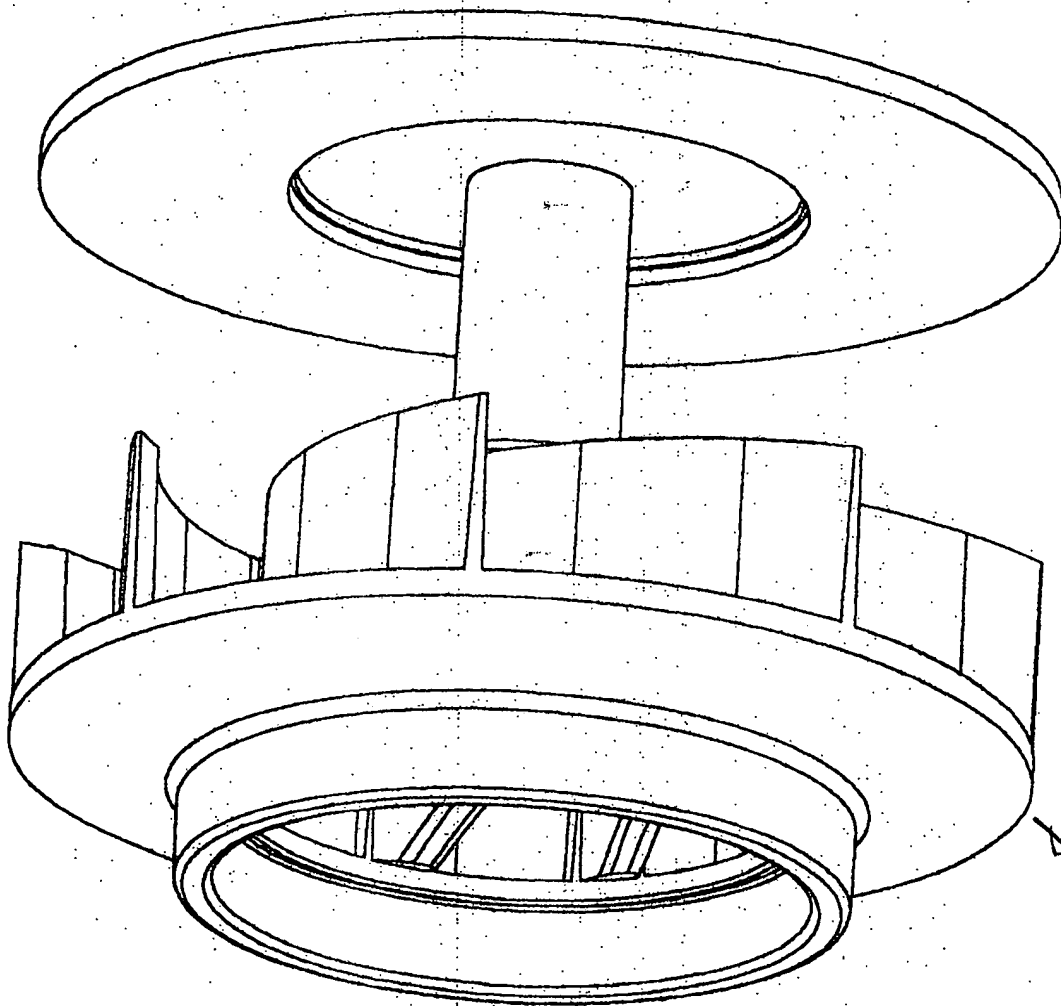


SVS

NEW DESIGN
INDIVIDUAL PARTS

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NEW DESIGN
INDIVIDUAL PARTS



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